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The Unknown Present

Master's Thesis in Philosophy

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Introduction

According to the Growing Block Theory of time (GBT), the present and the past exist but the future does not. The present is ephemeral, and the location of the present is at the continuously enlarging edge of a block. The present exists at the boundary beyond which there is no time and space. But given the Growing Block Theory, is there a way to know we are living in the present? This was a question raised initially by Braddon Mitchell in his 2004 paper 'How do we know it is now, now?' A seemingly Moorean answer like 'I just know!' might seem sufficient at first attempt but once the argument has been strengthened by people like Jeffrey Sanford Russell, Daniel Deasy, and Jonathan Tallant, GBT faces a serious hurdle from this so-called Epistemic problem of time. Deasy and Tallant formulate 4 versions of this problem, one of which is the Indifference argument, which they reject. According to the Indifference argument, we should be indifferent to the possibilities of the present time being at any particular location in time. No one location is special. In this thesis, I will be defending a version of the indifference argument that includes the premise of safety and permanent belief to it, insisting that given GBT, there is no remarkable metaphysical difference between what we assume to be the 'now' or the 'present' and any other time from the past, making knowledge of the present unattainable and unsafe. I use the notion that beliefs are permanent under the GBT. This makes it possible for there to be close cases of false beliefs. The notion of close cases and what makes a close case relevant to our discussion is discussed in the thesis. A close case of false belief insists that the belief does not amount to knowledge. This insistence is in turn made by the safety premise. A belief is considered unsafe when one could easily have believed falsely. Hence, a close case of false belief indicates such a close possibility of error, making knowledge unsafe. For my thesis, in defense of the indifference argument, I consider 2 cases. One from the (assumed) present and one from the (assumed) past and show that both cases fail to have knowledge of the present time. This shows that we should be indifferent to the possibility of the present being attested to any one of the cases, given that both the cases are on an epistemic par. The knowledge in both cases is unsafe. This goes against the claim by Deasy and Tallant, that evidence of the present is the knowledge of the present, which cannot apply here, as the knowledge about the present is unsafe. They accept that acquiring the knowledge of the present strictly requires us to be present. But if our beliefs about the present time do not amount to knowledge, then, this statement is not

useful. It is my view that this indifference about the 'now' or the 'present' renders GBT an incorrect theory of time. I suggest that given our inability to attain the knowledge of the present, we should consider the possibility of the present to be of an indexical nature and accept a B theoretic view of time that posits a static universe.

My Thesis unfolds as follows.

In the first chapter, I introduce the fundamental terminology relevant to the Thesis, including the contribution by a historical figure within the philosophical literature on time, J.M.E. McTaggart. I discuss his formulation of the A and B Series, giving rise to the A and B Theories of time. Succinctly put, the A series lays out events with A properties such as being in the past, present, or the future while the B series lays out events only with relational properties. I discuss the role of these in constructing different theories (A and B theories) of time. I also lay out and expand upon the A theory of time in discussion, which is the Growing Block Theory, introduced initially by CD Broad. I briefly go through the metaphysics of the Growing Block Theory, a theory that claims that the past and present are real, but the future is not. I discuss why it appeals to certain theorists of time and make the notion of 'now' or 'present' clear with respect to GBT. It is important to disambiguate the nature of the present as the A and B Theorists of time have differing notions of it.

In the second chapter, I introduce the literature on the Epistemic problem of time. This includes Braddon Mitchell's work which gave rise to the whole debate about the problem of 'now'. Here, using examples from Braddon Mitchell and Sider, I demonstrate the central problem to the growing blocker, which is the possibility of the subject falsely believing which time is present. Then I go through the initial reply to this problem which has proved to be unsatisfactory, such as Peter Forrest's defense of the GBT through the 'Past is real but dead' hypothesis according to which only conscious beings are present. I also go through Russell's version of the Epistemic problem, which builds upon Braddon Mitchell's Thesis and strengthens it. Russell introduces the safety condition to the Epistemic problem by using Williamson's version of safety and insisting that a belief must be safe for us to have knowledge. In the next section, I lay out the 3 key components that will be used to defend the indifference argument that I present in chapter 4. They are

safety, permanent belief, and closeness. I borrow ideas from Russell, Deasy, and Tallant to make these concepts relevant to my thesis in defense of the indifference argument. Then, I introduce the version of indifference argument that Deasy and Tallant extrapolate from Braddon Mitchell's argument. I explain the reasons for their rejection of this argument which is based on the 'Knowledge as Evidence' condition that they borrow from Williamson.

In the third chapter, I introduce a version of the indifference argument which combines the indifference principle with the safety condition and Permanent belief. Here I expand upon the notion of closeness. What is a close belief and what constitutes a close belief given the GBT? I establish what a belief should satisfy in order to qualify as a close belief. Then using safety and permanent belief, I proceed to argue against the GBT. Safety of knowledge is a concept introduced by people like Williamson, Sosa, and Pritchard and I make use of the version that is made relevant to the Epistemic Problem by Russell. I consider two cases and once these premises are applied to both cases 1 and 2, I argue that there is no remarkable difference between the 'now' of both the cases, as the knowledge of the present is unsafe. This stands in direct disagreement with the fundamental nature of the 'present' in GBT.

In the 4th chapter, I consider two objections that the growing blocker could come up with to undermine my argument. It is possible for the growing blocker to take the commonsensical view that the present *feels* special phenomenologically. They could suggest that this vivid temporal experience is due to the presence of a certain feature of 'nowness' or 'presentness' to the external world which we experience as vivid or special. I iterate L.A. Paul's reductionist view on the matter which explains why we have such temporal experiences. The second potential objection I tackle is to justify the move of rejecting the Growing Blocker's metaphysics in the absence of our epistemic certainty. We reject the GBT as it does not satisfy our need for a holistic program of theory. Its drawbacks outweigh the advantages as it fails to defend a very important element of the theory. I conclude that the indifference argument renders the GBT incorrect and that we should consider the option of adopting a B Theory of Time, according to which the nature of 'now' is merely indexical.

Chapter-1. Theories of Time

1.1 A and B Theories of Time

Before we get into the issue at hand, it is important that we define some fundamental terms in the Philosophy of Time. Terms like A Series, B Series, A Theories, and B Theories are used recurrently while referring to the different theories of time. The person who introduced these terms was the one who initially brought into the mainstream, the issues concerning the reality of Time itself. I am referring to the well-known John M. E. Mc Taggart, who claimed that time is unreal in his 1908 paper 'The unreality of Time'. His views had to do with the circularity of the A series which he concludes, results in the unreality of time. He introduces the concepts of the A and B series of time which are important in order to understand issues in the Philosophy of time. Events in the A series run from the past to the present to the future. There is a certain direction to time and a fixed order of events, and, according to him, the events that for example are in the distant past are prior to the events in the past, which occur prior to the events of the present, which occur prior to the events of the future, which in turn occur prior to the events of the distant future and so on. If we consider ourselves present now, then, Julius Caesar's crossing of the Rubicon was in the past. The outbreak of Covid-19 all over the world is happening in the present. The Sun eventually running out of Hydrogen and becoming a red giant is an event of the future. Events in the A series could also be looked at as before, after, or at the same time as each other. So, events of the A series can be in the past, present, future which can also be taken as occurring before after, or simultaneous with each other. This is not the case with the B series. In the B series, events are merely earlier to, later than, or at the same time as each other. Instances in the B series do not have the properties of pastness, presentness, and futurity like those in the A series do. Julius Caesar crossing the Rubicon is not a matter of the past. It just happens to be an event occurring before Covid-19 and the Sun's eventual death. In short, A series invokes monadic predicates or properties of time to instants along with relations between instants, whereas B series only invokes relations between events.

Here is McTaggart introducing this for the first time in 1908.

For the sake of brevity I shall speak of the series of positions running from the far past through the near past to the present, and then from the present to the, near future and the far future, as the A series. The series of positions which runs from earlier to later I shall call the B series. The contents of a position in time are called events.(p 458)

Stemming from these views, many theories have originated with emphasis on either the A series being fundamentally important or the B Series being fundamentally important to the nature of time. These Theories are consequently known as the A Theories or the B Theories of time. According to the A theories of time, which include Presentism, Growing Block Theory, Moving Spotlight Theory, there are fundamentally real times such as past, present, and future, and events are not just sequenced as occurring before or after one another. The present defines which events are in the past and which are of the future. Whereas according to the B Theories of time, which include the 4-Dimensional Eternalism, there are no such concepts as the past, present, and future, but merely events that take place before, after, or simultaneous to each other.

The 4-dimensional static universe B theoretic view introduces an important concept of the 'now', for what takes place 'now' according to the A Theories is the 'absolute present' whereas, according to the B Theories, there is no such thing as the absolute present, which makes the concept of 'now' merely indexical, or self-locating. An indexical is an expression that needs context and can change what that expression refers to in a different context. For example, if I say, 'She is here'. She refers to a certain person in that context and 'here' refers to a certain place in that context. It could have referred to a different person and a different place had that been uttered in a different setup. 'Now' is also an indexical expression. The token reflexive nature of 'now' instructs us to use it within a context. It is subjectively used. B Theorists refer to this as now(i), whereas the objective now that the A theorists use it with reference to the objective present is unique and metaphysically different[1]. 'Now(i)' according to the B theorists just means the moment at which something is being uttered. One could even divide the two camps into tensed and tenseless theorists of time. Tensed theorists being the A theorists who posit that time flows and think that the present is

[1] In this thesis, I will be using now(i) if a reference to an indexical present is made. In its absence, ‘now’ is to be taken as a reference to the objectively present A-Theoretic present time.

metaphysically distinguished. Tenseless theorists being the ones who consider the world to be a Parmenidean block[2] with no metaphysically privileged time. Or as Craig Callender (2017, p181) writes it more eloquently, detensers do not believe that the now carves out objective joints in nature[3].

The appeal of the A Theories lies in the presence of what is called Manifest Time[4]. Manifest time is time as we experience it. When we look at a car passing by us, we do not experience it as a sequence of movements that are stitched together which would appear as a flickering series but rather, we experience it as a whole. We experience the flow of time, the duration of it, and our experience presents us with a map that provides us with a temporal sequence of events. This is different from how Physical time is usually perceived, which is, as a mere sequence of events. A Theories, having posited the privileged now, and the flowing of time from the future to the present and into the past, seem to be more capable of explaining this Manifest time than the tenseless B theorists who believe in a static universe.

1.2 Growing Block Theory

[2] According to Parmenides, being is a whole and united, or as he calls it, oulon mounogenes. His view was that reality is not divisible and that change, motion, and time are illusions.

[3] One important detail here is that the physics concerning time has been able to manage without positing a privileged 'now'. This claim and its implications are not of great concern in this Thesis as I believe this is not an area where metaphysicians could add more value than physicists and cosmologists. But I will briefly expand on it. Physicists with regards to their view on time have traditionally been B Theorists who believe in a block or a static universe. Einstein and Minkowski supported a B theoretic view as it also supported their relativistic physics. Without getting into the fancy physics, we could state that the concept of relativity of simultaneity dovetails a lot more suitably with a block universe or a static universe than any A theory. According to the relativity of simultaneity, different subjects do not agree upon a common now if they are moving at some speed relative to each other. This provides a special challenge to the A theories to unproblematically incorporate the 'now' and have been under scrutiny from the Physics fraternity.

[4] Manifest time is a phenomenological feature. See Callender (2017) for more

Of the Theories that posit A theoretic features of time which includes an absolute present, past, and future, the one that is of interest to me in this Thesis is the Growing block Theory, also known sometimes as the Growing Salami Theory. The Growing Block theory is regarded as one of the more commonsensical theories about the nature of time which was introduced by CD Broad (1923). It holds that the past and the present are real, but the future does not exist. This is resonated in the way that people experience time and make decisions based on those experiences. Many believe that the future is truly open. They make decisions in the present based on what the likely outcomes would be in the future. We evaluate and carefully assess our decisions in order for the future to be favourable to us because we believe that the future hasn't already taken place. The past, on the other hand, is settled, we believe. We do not believe that the events of the past can be undone and those seem to be etched away, whether in our memory or in our consciousness somehow. In this way, there is an asymmetrical nature to the Growing Block Theory, henceforth referred to as GBT.

Broad introduces the GBT in his 1923 paper according to which,

When an event, which was present, becomes past, it does not change or lose any of the relations which it had before; it simply acquires in addition new relations which it could not have before, because the terms to which it now has these relations were simply non-entities. It will be observed that such a theory as this accepts the reality of the present and the past, but holds that the future is simply nothing at all. Nothing has happened to the present by becoming past except that fresh slices of existence have been added to the total history of the world […] The sum total of existence is always increasing, and it is this which gives the time-series a sense as well as an order. (Broad 1923, pp. 66-7)

This was the foundation for what became known as the GBT. As we can see, there are two important features of GBT. Firstly, that events of the past and present exist but the future does not exist. Secondly, the present is ever-changing and is metaphysically privileged. The theory Broad envisioned[5] had not been made explicit by him as it still

[5] See Emily Thomas (2019). She explores the origins of Broad's GBT and provides his views on the early versions of it.

lacked an understanding of important concepts such as how present entities are related to non-present entities and how to account for change within a growing block universe. The GBT has since been refined[6] and supported by philosophers like Michael Tooley (1997) and Peter Forrest (2004).

Without getting into the physics of relativity too much and notwithstanding the complicated relationship between space and time, we could consider GBT to be a 4-Dimensional A Theory, the 4th dimension being space-time. As more and more time elapses, there are 'slices' or 4-d space-time 'hyperplanes' that are being added to the already existing block, and since it is assumed that time is constantly passing, slices or hyperplanes are constantly being added to the block, making it grow with every passing unit of time. Hence the name Growing Block Theory. It is also sometimes known as the Growing Salami Theory if we could analogously compare the hyperplanes to slices of salami being constantly added to the block of salami. The edge of the block or the Salami is the end of existence. Nothing exists beyond that. It is therefore the cutting edge of the world and the Growing Block Theorists consider this to be the absolute present, as defined by their metaphysics. The Growing blockers do not believe in the existence of the future, but just the past and the present. But there is one difference between the past and the present, and that is a metaphysical one. The past is not special. It exists as a manifold of hyperplanes as a block, but the present, also real just like the past, is metaphysically special, in that it is at the edge of the block. It is this speciality that we recognize as happening now, according to GBT. This is an important distinction to keep in mind.

So briefly summarizing the key features of the GBT:

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[6] There have also been variations of the GBT such as the Shrinking block theory and the Dead past growing block (Forrest and Forbes) but these are not relevant to this thesis.

1. It is an A theory of time according to which the past and the present are real, but the future is not.
2. The past exists as a manifold block of space-time hyperplanes and the present is invariably at the edge of this block which is ever growing.
3. The difference between the past and the present is that although they are both real, the past is not metaphysically special, whereas the present is special, in virtue of being at the edge of the block.

Chapter 2. How can we know the present time?

2.1 Epistemic Problem of Time

The Epistemic problem of time took shape in Braddon Mitchell's paper 'How do we know it is now, now'? in which he contends that given the metaphysical nature of the GBT, it poses to the growing blocker, a problem of knowing which time is absolutely present. The growing blocker, as we know, would state that the cutting edge of reality, where the last hyperplane of reality(space-time) exists is the 'now' or the 'present'. But Braddon Mitchell thinks if the past is just as real as the present according to the Growing Blocker, and if there is no future block of reality, someone in the past (according to us) would mistakenly consider themselves to also be at the cutting edge of reality, as they would be in a position to believe where their existence is, is at a time following which there is no time. If this is the case, wouldn't we also be in a similar position epistemically speaking? What if the 'present' is actually in 2036 and we just falsely believe that we are in the present? He demonstrates using an example[7].

Suppose that as I write this paper early in October 2003 it is the present. On the growing salami view, all of the past is a volume of space-time. A little over 2000 years ago Caesar is crossing the Rubicon, believing he is doing so in the present. He is wrong. Of Course once he was right : there was a time when that moment was the last moment of being, and then he was crossing the Rubicon in the present. But that moment is gone [….] That then should lead us to wonder how we know that the current moment is the present. (2004, p 200)

The reason for Mitchell's use of present tense phrases such as Ceasar *is* crossing the Rubicon, believing he *is* doing so in the present, is because Mitchell assumes Caesar to believe that he is at the edge of the block, and hence, present. It is only a linguistic reference to a past Caesar who believes to be present. Although Caesar was once present,

[7] Sider, an Eternalist B Theorist, also provides a similar example *(2011, p 261)*

we believe Caesar is not present anymore as we believe we are at the edge of the block. Events only come into existence at the edge of the block.

From that demonstration, as Caesar is falsely believing that he is present, and within the framework of GBT, that he is at the edge of the block, we see his falseness. But do we have any epistemic privilege to assert that we know WE are certainly in the present? Braddon Mitchell thinks not. He believes that we could also easily be mistaking ourselves into believing that we are in the present. Because if we are not, then he asks, how do we know it is now, now?

Now, at first glance, one might mistake Braddon Mitchell to be a skeptic. For this is indeed a skeptical looking question. One that might sound similar to the question Descartes asked himself. How do I know I exist? But I believe he does not ask this question as a skeptic. Rather, he uses this question as a tool to make his point that we do not indeed know how it is the present. The skeptic would not be satisfied with an answer that provides us with evidence to show that we are present, but Mitchell would be satisfied with such an answer. For if it is a skeptical question, the GB Theorist could simply give a Moorean answer similar to I have two hands, I can see and feel my hands, so I know I exist. The Moorean could answer, I know I exist, it feels like this is the present, so I know I am present. The notion of not being present somehow seems like one that a skeptic would posit. But this isn't so. The commonsensical way of feeling we are in the present, and the unique experience of being in the present could be explained by further phenomenological features, as explained by LA Paul.[8] So, the Growing blocker cannot simply rely on the phenomenological aspect of experiencing time to answer the question. How else could they try to answer?

2.2 Forrest's reply

Philosophers like Peter Forrest (2004) have attempted to solve the Epistemic problem of time, but his reply has not been satisfactory either. Forrest has tried to answer Braddon Mitchell by taking a reductionist approach and appealing to a certain feature of us, in this case, our consciousness. His position is that only conscious beings are able to

[8] I discuss this in section 4.1

perceive the present time and the beings that are in the past are not conscious. They are "real but dead zombies" as he puts it in his 'Past is Dead' hypothesis. We, on the other hand, are conscious, and hence, present. Here is Forrest making that claim.

Life and sentience are, I submit, activities, not states. Activities only occur on the boundary of reality, while states can be in the past. [..] If x causes y then in the normal case y is after x. If there is a precise moment at which x ends then y begins only after that moment, not at it. At the precise moment of the end of the cause there is as yet no effect. Hence there is neither the state of affairs of x causing y nor the state of x having failed to cause y. In that situation, x has, however, a causal property, the tendency to generate an event of type Y where Y is the type to which y will belong. By causal activity I mean the occurrence of such tendencies at a time too early for it to be the case that there has been a causal relation or to be the case that there has not been one. [..] It is then intuitively plausible that life and sentience are causal activities. The past is then dead. (2004, p 359)

Forrest suggests that Life and Sentience, or consciousness is an activity that takes place at the border of the cause-and-effect relation, or rather in between the cause-and-effect relation. Consciousness, in this sense, could only be possible if we exist at the edge of the growing block since that is where the causal relations unfold in real-time. It is only at the edge of the block that potential lies, and this is why he insists that we must be conscious only at the edge of the block. The problems with this approach are manifold. Braddon Mitchell replies to Forrest enquiring about the compatibility of such a view with relativistic physics. Since relativistic physics questions the notion of a growing block where the edge is flat, it is tough to see how such a view as Forrest's can account for a block where different entities are unfolding consciousness at different times depending on their speeds. Notwithstanding the physical structure of such a view of time, there is also a problem with the metaphysical view Forrest has. For according to such a view, even subjects in the past experience a causal unfolding of events due to the cause-and-effect relation. How is the causal activity that takes place now any different than the causal unfolding of the past? I think what Forrest is proposing is that the present is a phenomenological property. This is why conscious beings experience the Present and once it is experienced, it traces back into the past oblivion. But as Craig Callender (2017, ch.9, p184) suggests, this may also be caused because there maybe indexical phenomenological

properties. There is a way in which a particular experience feels as it is experienced in the present. But this may not imply an objectively present experience.

I think Forrest's reductionist approach is well addressed by L.A. Paul as we shall see in chapter 4. Craig Callender also reiterates a similar view according to which our experience does not confirm a tensed theory of time. His view, like Paul's is that just because our mental representations about the world around us are tensed, does not mean that the world itself is metaphysically tensed.

2.3 Russell's safety argument

The argument by Braddon Mitchell, considered as the Epistemic problem of time, is taken further by Jeffrey Sanford Russell (2017), who adds a safety feature as a requirement to the knowledge of the present, by which one could not easily mistake themselves to be present. Given this, the Growing blocker is now obliged to provide a solution to the Epistemic problem as it concerns the very metaphysics of her theory. The growing blocker is motivated by the metaphysical guarantee her theory provides by clearly stating which time is present (the cutting edge). Once this privilege is taken away, and if she is not in a position to come up with a solution to the Epistemic problem, then her motivation to come up with such metaphysics is undermined.

Safety is an additional condition[9] to knowledge as attested by philosophers like Sosa, Williamson, and Pritchard. Williamson's version of safety says that in order for us to

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[9] Williamson introduces the safety or reliability conception as an additional condition to knowledge. In short, his claim is that a belief is reliable if it avoids being false in close cases (or call it nearby possible worlds or call it similar cases). He states.

[..]we are interested in a notion of reliability on which, in given circumstances, something happens reliably if and only if it is not in danger of not happening… In particular, one avoids false belief reliably in A if and only if one avoids false belief in every case similar enough to A. [Williamson 2000, ch 5, 124]

According to the usual possible world standards, a belief could have easily happened if it happens in a close possible world. Also, how close the possible world would depend on how similar it is to the actual world.

know something, we cannot be in a position where we could easily have been wrong about it. Russell uses a slightly modified Williamson version of the safety argument[10]. The safety condition is primarily used to eliminate cases of lucky beliefs, such shown in the Gettier cases. Safety has traditionally been used as a condition to eliminate beliefs that might have easily been false. For example, in the cases of the fake barn county[11]. In fake barn county, the subject drives through the county where almost all (99.9 %) of the barns are barn facades and not actual barns. The villagers have put up these facades in order to make their county look pretty. But when subject S drives through the county, he looks at the one barn that is actually a barn and not a façade. The argument here is that subject S does not know that there is a barn on the hill because even though his belief is true, it could have easily been false, had the subject looked at any of the 100 other barns within his range of sight. We can say that in any close possible circumstance, where the subject looks slightly away from the real barn, this belief would be false. Safety has thus been employed in order to avoid beliefs that could easily have been false. Thus, if the safety condition is not met, then the belief does not amount to knowledge. Russell uses the safety condition in a slightly different way. It is not used to avoid lucky beliefs as in the case of the fake barn county. But it is used to avoid deceptive beliefs. It is not in virtue of being lucky that past subjects believe they are present, but rather because of the deceptive nature of the present. Since the subjects in the past (Julius Caesar crossing the Rubicon) seem to have false beliefs about which time is present, Russell uses Safety as a way to prove that we too are vulnerable to having close cases of false beliefs when it comes to knowing which time is present, making

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There could be very near worlds and far away possible worlds, so the notion of closeness is vaguely defined. According to Williamson, fixing the margin for safety depends on the features of the context.

[10] Although safety is popularly accepted as an additional condition to knowledge, the Growing blocker may perhaps be compelled to reject Russell's version of Safety. But insofar as the motivation for the safety condition is concerned, which is to avoid a situation where a subject could have easily believed otherwise, Russell's version of the safety condition satisfies it. It is not modified in a way that violates the fundamental motivation to introduce the safety condition. This modification is only intended to make the safety condition relevant to the belief of being in the present.

[11] Crediting Carl Ginet with this example. See Alvin I Goldman (1976) for more on this subject

that knowledge unsafe. The safety condition according to Williamson (2000) could be formulated as

Safety- If one knows, one could not easily have been wrong in a close case.

Russell reframes it as

Safety- If you know P, then necessarily: if anyone closely believes P, then P is true.

The immediate question that arises is, what is a close belief? When is a belief considered close enough? Here is what Russell has to say.

What is closeness? The idea is that a close belief has a sufficiently similar basis to yours. This is rough, and it may well be impossible to elucidate closeness without eventually appealing back to knowledge. But we can still make good judgments in lots of cases. "Basis" is used in an extended sense: a belief's basis isn't generally "in the head". Possible believers in situations with importantly different environments, or causal laws, or underlying metaphysics, typically don't count as close. (2015, p-156)

The description that Russell provides is insufficient as it does not explicitly state what constitutes a similar basis relevant to the belief of being in the present. In section 2.4, I describe the eligibility condition for a belief to qualify as a close belief.

The safety argument Russell argues for includes another important premise. That of Permanent belief. According to Russell, Permanent belief is a natural consequence of the GBT. In section 2.5, I provide a defense of Permanent Belief that I borrow from Russell, Deasy and Tallant.

*Permanent Belief - If someone closely believes P, then it will always be the case that someone closely believes P***.**

Let us then look at the argument Russell provides.

Safety - If someone knows P, then necessarily: if anyone closely believes P, then P is true

The argument goes as such. Let P be the proposition that time 't' is present.

Let Grover be a subject who considers this time to be the absolute present time. According to Russell, such a belief is close to itself due to the principle of reflexivity. Let us agree with him for now that such a belief is indeed close to itself. We now have a close belief which is also permanent, given the permanent belief premise. So, if someone closely believes P, then, it will always be the case that someone closely believes P. But we know that given the GBT, even though the future does not exist at the time Grover formed his belief, it will exist. Because more time will elapse, and this means more of the block will be added to the already existing block. Following this, Grover's belief that P will not be true anymore, since he is not present anymore. Therefore, we have a close case of false belief here. It will not always be the case that if anyone closely believes P, then P is true. Russell adds another feature of Perpetuity to his argument which states that if necessarily A, then it will always be the case that A. Using this he intends to show that there will always be a close possible false belief. He then concludes that Grover does not know P. (Russell 2015, p-157)

In short, Russell says that the belief P is unsafe and does not constitute knowledge. Russell aims to prove that by adding the feature of safety as a requisite for the knowledge of the present time, and it being proven unsafe, we can thus conclude that we cannot in fact know that it is present within the GBT of Time. Although his version of safety is an anomaly[12] in dealing with the the Epistemic problem of time, it is rather redundant with axioms such as Reflexivity and Perpetuity. Russell's argument states that since the Subject, Grover, in this case believes P, according to the reflexivity principle, that belief is close to itself. Maybe Russell does this to avoid any confusion about what is considered a close belief with regards to P. But, as you will see in my version, once we define what a close case is, we will not require Reflexivity. Also, Perpetuity seems like a seemingly obvious repercussion of the GBT, since the block that is formed will be Eternal.

2.4 Closeness for GBT

Before we move on to chapter 3 and the Indifference argument, it is important to establish and clarify the notion of closeness. What is a close case in a situation where we are positing some time as the present time? The initial appeal towards eliminating close

[12] Because Russell does not use it to avoid lucky beliefs. He uses it to avoid deceptive beliefs

cases of false beliefs has been to avoid evil demon type metaphysics where we seem to be delusional about what is really happening. Let us for the sake of simplicity agree that there aren't any evil demon type situations in which we wrongly think we are present. Now, we need to have an eligibility condition for what a close case might look like. For the Growing blocker, who believes that the present is at the cutting edge of the block, any close case believer would have to believe that he is at the edge of the block at the moment of the close case belief. That is, in any close belief, or close possible world belief, the subject would have to believe that she is at a time following which there is no time. Only then will that world's metaphysics comply with that of the Growing blocker. If the actual belief (that she is present) is made by the subject at the edge of the block, a close belief that indicates she is not at the edge of the block is disqualified as one, as it would never allow for a close belief to be true, and the knowledge would never be safe. Once we assume that any reference to the present time in a close belief refers to the edge of the block, the argument becomes clearer. Note that the actual belief and close belief need not be simultaneous. If a subject forms a belief that she is present at 19:03 today, a close belief need not be disqualified if it is formed at 19:04, as long as the belief is made in virtue of believing it is made at the edge of the block.

2.5 Permanent belief

The addition of the Permanent belief to the indifference argument is key to the defense of it. In this section, I address an important part of the indifference argument that is Permanent belief, which states that beliefs are permanent given the Growing Block Theory. I believe Permanent belief is abundantly and satisfactorily defended by Russell, Deasy, and Tallant. Russell provides the basis for one version while Deasy and Tallant provide another basis to claim that beliefs are permanent for certain A theories. Russell presents the argument for Permanent belief as follows.

1. *If someone closely believes P, then it will always be the case that it was once the case that someone closely believed P.*
2. *Always: if it was once the case that someone closely believed P, then someone once closely believed P.*
3. *Always: if someone once closely believed P, then someone closely believes P.*

4. *Therefore, if someone closely believes P, then it will always be the case that someone closely believes P. (2017, p161)*

Russell builds his argument using two principles he defends. Pure Belief, which is (3) and Permanent being, which is (2). (1) is an axiom from Prior's standard tense logic. He concludes only the so-called Pure belief Growing Block Theory can accept Permanent belief, and he describes conditions for a belief to be pure. According to him,

Being F is temporally pure if and only if: it is always the case that, if something was once F, then (unrestrictedly speaking) something is F. (p159)

He also states,

Closely believing P is temporally pure.(p160)

So according to him any close belief within the growing block view is permanent. But there is another simpler way to defend Permanent belief which relies on a simple metaphysical adjustment. Deasy and Tallant offer another way to defend Permanent Belief. According to them, the only difference between the B Theorists and the A Theorists such as Moving Spotlighters and Growing Blockers is that the A theorists simply take the B theoretical view of time and add a certain feature or features to it such as giving time a direction and assigning an objective present[13]. It is only these additional properties that differentiate certain A theories (MST and GBT) from B theories. They provide a thought experiment in which one could take a B theoretic view of time and add a certain feature to it such as 'glow' where all the objects at a certain time 't' glow. Assume that objects at any time 't' can only glow once and it will never be the case that objects at 't' will glow again. But this feature does not interfere with the beliefs that exist before, after, or at the time at which 't' glows. Deasy and Tallant believe that the only thing that changes according to such a metaphysic is the relation they have with regard to the glowing time.

[13] I use objective present to mean the same as absolute present or metaphysically special present.

[...]They are located at times that used to glow, and the time that now glows is later than the times at which they are located. (2020, p19)

This indicates that a property like glow, which is essentially a property of being metaphysically special does not hinder close beliefs from being permanent. Translating it to GBT, a property such as the present being at the edge of the block is no reason to reject close beliefs from being permanent. It is possible for an A theoretic view to accommodate a property such as glow (or being at the edge of the block) and not violate any relationships with regards to the present time. If such a property is possible, and if B Theorists obey Permanent belief, why should Permanent belief not be applicable to the GBT? After all, the property glow could just as well indicate the property of being at the edge of the block. This still would not violate any principles or disturb any relationship of a present time with respect to the edge of the block. So, if Permanent belief is valid in a B Theoretic view, it is also valid for GBT.

Chapter 3. The Indifference Argument

3.1 Deasy and Tallant's indifference argument

Let us now move on to the Indifference argument as presented by Daniel Deasy and Jonathan Tallant. In their combined work exploring the epistemic problem of time, they spell out 4 versions of the argument regarding the epistemic problem of time. One of them is the indifference argument. The basic idea is that given the many possibilities that concern the existence of an absolute present time, it would be equally likely that any given possibility is the present, or rather, any possibility is equally likely to be the present. This goes against the idea of the A theories that posit the present as something metaphysically special, something that has a privilege over the other times. Be it the feature that it has a spotlight over it like, as discussed in the Moving spotlight theory, or a feature like being at the edge of the block, as in the GBT.

Deasy and Tallant go on to provide a way out of the indifference argument by positing that the knowledge of the present strictly requires us to be present and that the evidence for us being present is merely the knowledge of the present (This is obtained from Williamson's knowledge as evidence, or E=K). This equates the evidence available to someone to all the propositions that make up knowledge for her. This might be in virtue of Williamson's knowledge first epistemology where he establishes knowledge as the most basic form in epistemology. In Williamson's view, Knowledge does not equate to the traditional justified true belief, as knowledge is more foundational than believing. It might seem circular that they are making the knowledge of the present appeal to evidence, and the evidence of knowing the present, to having the knowledge of the present. Nonetheless, if we are to believe in the externalism of knowledge, then the belief about the present need not base its truth on what we think is true but rather, our belief will constitute knowledge if it is indeed the case that it is the present time.

Here is the indifference argument as presented by Deasy and Tallant.

PRINCIPLE OF INDIFFERENCE: Given n mutually exclusive and jointly exhaustive possibilities c1… cn, each of which is consistent with our evidence, the probability of each of c1… cn is 1/n

1. *Given 4D A-theories, there is a vast number of mutually exclusive and jointly exhaustive possibilities c1… cn concerning our location in time relative to the present (e.g. concerning our location relative to the 'edge of the growing block' (GBT) or to the 'spotlight of presentness' (MST)) in only one of which we are present and in the rest of which we are non-present.*
2. *Given 4D A-theories, each of c1… cn is consistent with our evidence. Therefore*
3. *Given 4D A-theories, the probability that we are present is very low and the probability that we are non-present is very high (from (1), (2) and the Principle of Indifference). (2020, p5)*

Deasy and Tallant formulate this argument by extrapolating from Braddon Mitchell's work where he suggests that since we do not have any independent access to the future, we should be indifferent to the possibility of the present being at any one location. It could be one of many equal possibilities that the current moment is the present. One key takeaway from the principle of indifference is to avoid attesting the metaphysically special nature to our present. Deasy and Tallant make the argument more explicit but they do not stand in favour of the indifference argument. They build on Russell's suggestion that the many possibilities of which location is present are not equally probable. There might be some cases that are more likely than others, and some that are less likely. So, not all possibilities have equally 1/n probability. Many possibilities might not be compatible with our evidence, so for a possibility to be truly the present, it needs to be compatible with our evidence. But what can we consider as evidence? That is a good question. Deasy and Tallant think that the evidence for our claim that any particular case is the present cannot simply be our qualitative experience as that could be flawed. They instead suggest that the evidence by which we can confirm that it is the present time is simply the knowledge of the present. So, when we arrive at the question of how we know it is the present, Deasy and Tallant, taking help of E=K from Williamson, say that we know that we are present only if it is the case that we are present, so all the other possibilities as stated in the indifference argument will not be possessing knowledge. Only one of them amounts to knowledge so only the possibility in which it is actually the present will qualify for knowing it is the present. Accordingly, the knowledge of the present strictly requires us to be present. Hence, they suggest that the indifference argument does not work, as the possible cases are not merely the same anymore and they are not on an epistemic par.

But, since we now established the safety condition as a necessity for knowledge of the present, we have a way to defend the indifference argument. Let us consider a version of the indifference argument with two possible cases. One of which is what we all in this room believe to be present. Right now. [Insert day and time of thesis defense]. Let us call this person in Case-2 Y. Case-1 will have a person X who is relatively in the past to us, some random time, let us say on July 18, 1994 at 19:03. Let us now form a version of the indifference argument that applies the principles of Permanent Belief, Safety and Closeness in the next section.

3.2 Indifference argument with Safety and Permanent belief

Let P be the proposition that the current time is the one succeeding which there is no other time (or Present- According to GBT)

Indifference- Given GBT, if the subject's knowledge of the absolute present is unsafe in both cases 1 and 2, then, we should be indifferent to both possibilities.

Marker- In order to differentiate between case-1 and case-2, we need a differential marker that shows why case-1 and case-2 are different, and what case-2 possesses that case-1 does not. If there is no marker, there is no difference, making the subjects of case-1 and case-2 epistemic peers.

1. In Case 1, X believes that P.
2. For X, there exists a close belief for P.
3. Given Permanent belief, it will forever be the case that case-1 closely believes that P is true at 19:03, July 18th, 1994.
4. According to the GBT, more of the block is added constantly and P does not remain true forever.
5. So there exists a close case of false belief for X as soon as more block is added.
6. According to Safety, X does not know that P.

For case 2, the same argument applies.

1. Y believes that P.
2. For Y, there exists a close belief for P.
3. Given Permanent belief, it will forever be the case that Y closely believes that P is true right now (insert Date and Time of thesis defense)
4. According to GBT, more block is constantly being added and our belief that P does not remain true forever.
5. There will exist a close case of false belief, as more of the block will be added.
6. According to Safety, we, Y, do not know that P.

Conclusion- Knowledge of X and Y is unsafe and there is no differential marker between them**.** Hence, case-1 and case-2 are metaphysically indifferent regarding the objective present.

2 is a consideration of a close possible case. As described in the section on closeness, for a belief to be considered close, the subject has to form the belief at the time which refers to the edge of the block. At whatever time the close belief is made, the believer needs to attest that she is forming it as if it were at the cutting edge of the block. Only beliefs that refer to such a time can be considered close. 3 is obtained from Permanent belief. 4 is a direct consequence of GBT. 5 and 6 follow from the Safety condition.

From the Permanent belief premise, there will always be a close belief that X believes that she exists at the cutting edge of the block. But we also know that the Block is always growing, which means, as soon as more of the block is added, there will exist a close case of false belief. We can say this for X in case-1 because, we, Y, the people of case-2 exist further down the block than case-1 believers. So, we can infer that they are having a close case of false belief. Once there is a close case of false belief, Safety disregards that as knowledge. So, the case-1 believers do not know that P. According to case-2 believers, they are at the edge of the block, which means that they believe that P and there exists a close belief such that P is true. But, as we have inferred for case 1, as soon as the moment of this belief passes, given permanent belief, we will still have the close belief that P, or a close belief that we exist at the cutting edge. But since there will be more of the block added, there will be a close case of false belief. This means that our knowledge about

the present too is unsafe. Both X in case-1 and Y in case-2 do not have a way to show that they possess knowledge. They both have close beliefs and close cases of false beliefs which makes them merely epistemic peers as there is no remarkable difference between the 2 cases.

The Indifference argument is modified in two ways compared to Deasy and Tallant. The first modification is to add the Safety feature and the second is to accommodate only the GBT and no other A Theories, as I believe there could be ways that other A theorists could escape the Indifference argument given their underlying metaphysics. [for defense, refer to Ross Cameron's MST] In this Thesis, I am only concerned with the GBT of time. The Growing Blocker has no escape here. Given the absence of a marker that differentiates case-1 and case-2, we can say that for case-1 and case-2, the knowledge is unsafe, which means that both the subjects do not know P. Both X in case-1 and Y case-2 do not know that they are living on the cutting edge of the block. This is bad news for the Growing Block Theorist as one of the most important appeals of the Growing Block metaphysics is that it allows us, or rather guarantees us the knowledge of which time is present. But the safety premise in conjunction with the Indifference argument shows otherwise.

The takeaway from this argument is that there is no clear way of knowing that we live on the edge of the block, which defines the present for the Growing blocker. But if the growing block theory is true, there has to be some time that is at the edge of the block. Can someone who is truly (assuming the truth of GBT) at the edge of the block know that they are there? Can their knowledge differ from the seemingly present but unsafe knowledge of the members in other places of their block? How should we proceed now that we have established the indifference argument? I think the indifference argument leaves us with two options:

One is that the present could be metaphysically idle[14], which is a concern that Ross Cameron (2017, p 48-49) expresses. In his defining work on the Moving Spotlight Theory,

[14] This idea is easier to understand within the context of the Moving spotlight theory. For a moving spotlighter, the spotlight is always on the present. The spotlight is not what entirely defines the present, but it lets us know where the present is at any given time. For the present to be a metaphysical idler in MST, there

he defends his theory against such a possibility. According to this notion with regards to GBT, even though the present is at the cutting edge of the world, there would be no differential marker that separates the knowledge of the present from the past. The present does not give us any clues regarding how we could recognize that it is at the cutting edge of the block, hence making it a metaphysical idler. Positing such an unusual feature to the present would not render the GBT untrue but avoids a simpler option in exchange for holding on to the notion of the objective present being at the cutting edge of reality. Hence adding such a feature to the present should be avoided by the A theorists of time.

Another possibility, which I believe is the way theorists of time should prefer, is to reject the Growing Block Theory of time. The reason why we are unable to gain knowledge of the present is that there is no metaphysically special present time. Perhaps a B theoretic static universe is the way we should conceive the world, which expresses 'now' as 'now(i)' which is an indexical expression of the present time. A subject's present would simply be the location and time in the static block universe at which he utters something (or thinks something). There could be multiple context-sensitive presents but not any one metaphysically special present. Such a theory of time could explain the phenomenological aspects of time such as manifest time and avoid the epistemological problem of time since they do not posit such a thing as an objectively special present. I am certain that there are many challenges for the static universe B Theorist to contend with, but I hope this thesis provides her with one less problem to deal with and some reaffirmation to pursue a B theoretic view of time. In conclusion, then, the epistemological problem of time renders the Growing block theory as incorrect, or unsatisfactory at best, as the present remains unknown.

would be a present, but no spotlight over it for us to locate the present. Within such a metaphysic of time, it is possible for the present to exist but not possible to know that it is present.

Chapter 4. Objections and replies

In this chapter, I will look at some of the ways in which the indifference argument could face threats and reply to them.

4.1 The experience of the present is special.

One way the Growing blocker might retaliate is by saying that our commonsensical view is that we experience the present as something special. I believe this is the motivation behind their claim that we discussed earlier, which is that acquiring knowledge of the present strictly requires us to be present. This is understandable. After all, the Growing blocker might ask why is it that we all feel the special nature of the present, which is reflected in the vivacity of the present moment. It certainly feels like there is something to the present moment, which we recognize, and they translate this to their claim that it must be because we *are* present right now. But a good reply to this view can be found in the work of LA Paul, who defends against this antireductionist view of temporal experience. An antireductionist view about temporal experience is that there must be some additional fundamental monadic property such as presentness or nowness in order to justify the vivacity of our seemingly present experiences.

4.2 L.A. Paul's reply

The reductionist LA Paul argues that it is not necessary to posit some external fundamental property of nowness to account for our vivid temporal experience. She believes one could account for this kind of experience even without such external properties. That our temporal experience is simply a part of an overall phenomenological experience and nothing more.

> In other words, it is a matter of the ontology needed to make sense of the subjectivity of experience. The reductionist should argue that our experience as of nowness is simply part of the experience involved in being conscious and that, as long as we endorse enough ontology to make sense of the oomph of consciousness, we have enough ontology to make sense of the oomph of nowness.(2010, p 340)

By the oomph of consciousness, she refers to the experience about the passage of time. This experience consisting of the passage of time and the presentness of time could also be possible within a static universe, in her view. Observe that she uses the term 'as of nowness' to emphasize that we don't experience time as 'now' but rather 'as of now'. No temporal experience for us is exempt from being perceived as the present time. She further writes.

Consider our experience as of nowness. The reductionist can argue that the subjective character of our experience as of nowness is entirely encompassed by the subjective power of what-it's-like experiences. When we have a phenomenological experience, such as an experience as of redness, there is a certain way it is like to have such an experience. (As my "as of" locution here suggests, I am not taking "experience as of redness" to mean that we are successfully seeing an instance of redness. Rather, I take it to mean that we are having a redness quale.) But, when we have an experience as of seeing red, there is more to this experience than just experience as of redness, that is, than just having a red quale. Along with having an experience as of redness, we also have an experience as of the nowness of the redness. We also have a nowness quale. In other words, when we have experiences as of redness, these experiences are not just as of redness simpliciter. They are experiences as of redness-now. (2010, p-341-2)

Think about this. Every experience you ever had, was had as of now. The moment you opened your eyes to experience this world, the experience you had celebrating your 5th birthday, and even the experience you had yesterday. All these experiences were temporal experiences as of present. So is your current experience. You experience this moment as of present. This gives Paul reason to think that any temporal experience as of now is part of the overall conscious experience. She goes on to argue that the notion of the nowness and passage of time boils down to our experience as of change. The A theorist supports the idea that this experience of change is a dynamic one whereas the static universe B theorist believes that change is merely a qualitative variance in the structure of the universe. It is only the intrinsic properties of objects that change over time but not the objects themselves. Paul argues that, just like the illusions about apparent motion and apparent color changes, our experience as of change also forms an illusion of flow or passage of time, which ultimately is the motivation to posit a 'nowness' feature. But such a feature is indeed not necessary.

But what does this mean for Growing Block theory? Such a view as Paul's adds more weight to the view that a dynamic 4-d theory such as the GBT is not necessary to account for the phenomenology of our temporal experiences. This could just as well be achieved with a static B Theoretic universe, so the temporal experience argument cannot be used in favor of the GBT to support the idea of a metaphysically distinct and special present.

4.3 Bridging the gap between the metaphysics and epistemology of time.

Another potential objection I see from the Growing Blocker is: Does the absence of our knowledge about the present justify our rejection of the Growing Block Theory? Does our epistemic uncertainty about the present time undermine the theory of the Growing Block metaphysician who believes that the present time is a certain way? I believe so.

Ross Cameron in his book The Moving Spotlight (2007) faces a similar challenge arguing against presentism and suggests that we choose a theory of time based on our justification of a holistic program of theory choice. We need to weigh out the benefits, costs and look up the security of certain theoretical virtues and choose a theory of time based on the cost-benefit analysis which complies with our overall theory of the world. Taking his suggestion, the way we can support the Growing Block Theory as our theory of time is if it presents itself as holistically the best theory of time. But does the Growing Block theory satisfy our demand for a holistically appealing theory of time? I don't think so. One of the great advantages of choosing a growing block theory is the guarantee it provides us about which time is present.

I say this as I fail to understand what motivates a growing blocker from not choosing an eternalist theory of time? Simply pointing this out to Manifest time and our temporal experience which seems to tell us we are in the present does not seem enough to me, especially, as we discussed in the previous section, such views based on purely our temporal experience could be unreliable. There is no need for an external feature of presentness for our temporal experience to be the way it is. We need to ask what compels the Growing Blocker to reject the existence of a future block of space-time hyperplanes?

To reject a future block, the Growing Blocker must posit an objective present. It is this that demarcates the block with the 'present' as its boundary. In order to reject the future block of time then, the Growing Blocker would have to know what differentiates the future from the present which is what makes the knowledge of the present so valuable for the Growing Blocker. I see the motivation of the growing blocker to reject the existence of a future time to be the guarantee of the knowledge of the present time. But without this epistemic certainty about the present time, it looks like GBT surrenders its greatest appeal and by taking Ross Cameron's suggestion, if we are to choose a theory based on its holistic appeal, the GBT would have to be rejected.

Conclusion

In this thesis, I have defended the argument that given a growing block metaphysic of time, we encounter the problem of not knowing which time is present. I use the safety argument in conjunction with the indifference argument to show that the growing blocker has to be indifferent to the possibility of knowing the absolute present in both cases 1 and 2. Case 1 refers to a relatively past occurrence where the subject at that relatively past time believes they are present. Case 2 refers to us at the time which we believe to be at the edge of the growing block, i.e., the absolute present. Acknowledging that belief is permanent given the growing block theory leads us to conclude that knowledge of the present is unsafe in both cases 1 and 2 as there is a close possibility of false belief. If our knowledge about the present is unsafe in both cases, then both subjects do not account for knowledge about the absolute present. Hence, we should consider both these cases to be on an epistemic par.

We are left with two viable options. The first one being, although the Growing block theory of time is correct, there is no way of knowing which time is present due to the metaphysically idle nature of the present. The present does not differ in any metaphysically distinct way from other times that can be attained as knowledge by the observer. This seems dubious as it does not offer a way for the attainment of knowledge about the present even for true observers. People who are truly at the edge of the block have no epistemic privilege over others who falsely believe. This is unappealing as it provides us no worthy reason to posit such a feature. The other option is to reject the Growing block Theory of time, which I think is the way theorists of time should take. If knowledge of the present is unattainable, it could be possible that the nature of the present is not in a way that is expressed by GBT. The present may not be defined by the edge of the growing block. This leaves other theorists of time encouraged to pursue a better suitable theory of time. The indifference argument adds more weight to a B Theoretic approach and encourages future theorists of time to pursue it by avoiding epistemic problem of time. In conclusion, what the indifference argument shows us is that given GBT, the present remains unknown.

Abstract

The Growing Block theory (GBT), which is a theory that posits a past and a present but no future, faces a problem about the knowledge of the present time. If the past is just as real as the present, we face the possibility of falsely believing which time is present. This Thesis supports the safety argument presented against the Growing Block Theory to show that knowledge about the present is unsafe. It makes use of the safety premise, permanent belief, and closeness in conjunction with the indifference argument to show that past and present subjects alike, are on an epistemic par with respect to the knowledge of time. I suggest that once the Growing blocker accepts such a view about propositions, they face the challenge of their knowledge not being safe. I propose that due to the absence of a differential marker that proves the present time as metaphysically special, the theorists of time should perhaps consider an alternate theory to avoid the Epistemic problem of time.

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